Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-231. (Canceled)

232. (Currently Amended) A method of manufacturing a combinatorial sensor array for detecting an analyte in a fluid, comprising the steps of:

providing a first solution of a first organic material at a concentration x in a first solvent, a second solution of a second organic material at a concentration y in a second solvent, and a substrate having a first preselected region and a second preselected region;

contacting said first region with said first solution at said concentration x;

contacting the second region with the first solution at said concentration x+a;

contacting the first region with said second solution at said concentration y; and

contacting the second region with the second solution at said concentration $y+b$,

wherein, the first region forms a first sensor having a blend of the first organic material at ~~mote~~ mole fraction m and the second organic material at mole fraction 1-m and the second region forms a second sensor having a blend of the first organic material at mole fraction n and the second organic material of mole fraction 1-n, said two sensors forming a combinatorial sensor array,

~~and~~ wherein the sensor array is configured to be ~~operatively associated~~ optically connected with a detector,

wherein the first region and the second region on the substrate are physically separated, and

wherein the first region is recessed below the surface of the substrate in a first well and the second region is recessed below the surface of the substrate in a second well, the first well physically separated from the second well.

233. (Previously Presented) The method of claim 232, wherein m = n.

234. (Previously Presented) The method of claim 232, wherein x=y.

235 (Previously Presented) The method of claim 232, wherein a=b.

236. (Previously Presented) The method of claim 232, wherein a and b are positive numbers.

237. (Previously Presented) The method of claim 232, wherein a and b are negative numbers.

238. (Previously Presented) The method of claim 232, wherein the first organic material is a first polymer.

239. (Previously Presented) The method of claim 232, wherein the second organic material is a second polymer.

240. (Previously Presented) The method of claim 232, wherein the first organic material is a first polymer and the second organic material is a second polymer.

241. (Previously Presented) The method of claim 240, wherein the first polymer is different from the second polymer.

242. (Currently Amended) The method of claim 232, wherein the first organic material is a first monomer, and further comprising the step of[[.]]:

polymerizing said first monomer by applying an activating agent to the first region and to the second region.

243. (Previously Presented) The method of claim 242, wherein said activating agent is selected from the group consisting of light, heat and chemical.

244. (Previously Presented) The method of claim 232, wherein the second organic material is a second monomer, and further comprising the step of:

polymerizing said second monomer by applying an activating agent to the first region and to the second region.

245. (Previously Presented) The method of claim 244, wherein said activating agent is selected from the group consisting of light, heat and chemical.

246. (Previously Presented) The method of claim 232, wherein the first solution is miscible in the second solution.

247. (Previously Presented) The method of claim 246, wherein said first solvent is the same as said second solvent.

248. (Previously Presented) The method of claim 232, wherein the step of contacting comprises spraying.

249. (Previously Presented) The method of claim 232, wherein the step of contacting comprises a step selected from the group consisting of coating, pipetting, micropipetting, depositing, spinning, evaporating, dipping and flowing.

250. (Previously Presented) The method of claim 232, wherein, after the step of contacting said first region with said first solution at said concentration x, the method further comprises the step of varying the concentration of the first organic material in the first solution to concentration x+a.

251. (Previously Presented) The method of claim 250, wherein the concentration of the first organic material in the first solution is smoothly varied to concentration x+a.

252. (Previously Presented) The method of claim 250, wherein, after the step of varying the concentration of the first organic material in the first solution to concentration x+a, the method further comprises the step of moving the first solution to said second region.

253. (Previously Presented) The method of claim 232, wherein, after the step of contacting said first region with said second solution at said concentration y, the method further comprises the step of varying the concentration of the second organic material in the second solution to concentration y+b.

254. (Previously Presented) The method of claim 253, wherein the concentration of the second organic material in the second solution is smoothly varied to concentration y+b.

255. (Previously Presented) The method of claim 232, wherein, after the step of varying the concentration of the second organic material in the second solution to y+b, the method further comprises the step of moving the second solution to said second region.

256. (Canceled).

257. (Canceled).

258. (Currently Amended) ~~The~~ A method ~~of claim 256,~~ of manufacturing a combinatorial sensor array for detecting an analyte in a fluid, comprising the steps of:

providing a first solution of a first organic material at a concentration x in a first solvent, a second solution of a second organic material at a concentration y in a second solvent, and a substrate having a first preselected region and a second preselected region;

contacting said first region with said first solution at said concentration x;

contacting the second region with the first solution at said concentration x+a;

contacting the first region with said second solution at said concentration y; and

contacting the second region with the second solution at said concentration y+b,

wherein, the first region forms a first sensor having a blend of the first organic material at mole fraction m and the second organic material at mole fraction 1-m and the second region forms a second sensor having a blend of the first organic material at mole fraction n and the second organic material of mole fraction 1-n, said two sensors forming a combinatorial sensor array,

wherein the sensor array is configured to be optically connected with a detector,

wherein the first region and the second region on the substrate are physically separated, and

wherein the first region is surrounded by ridges on the surface of the substrate and the second region is surrounded by ridges on the surface of the substrate, the first region physically separated from the second region.

259. (Previously Presented) The method of claim 258, wherein said ridges are formed from photodefinable material.

260. (Previously Presented) The method of claim 258, wherein said ridges are formed from sputtered material.

261. (Previously Presented) The method of claim 232, wherein the substrate further comprises a third preselected region and a fourth preselected region, the four preselected regions arranged in an array, the array having a top edge, a bottom edge, a left edge and a right edge, the top edge adjacent to regions 1 and 2, the bottom edge adjacent to regions 3 and 4, the left edge adjacent to regions 1 and 3, and the right edge adjacent to regions 2 and 4, and further comprising the steps of:

contacting said first region and said second region near said top edge of said array with said first solution at concentration x;

contacting said third and fourth regions with the first solution at concentration x+a

contacting the first and third regions near said left edge of the array with said second solution at concentration y; and

contacting the second and fourth regions with the second solution at concentration y+b,

wherein, each region forms a sensor having a blend of the first organic material and the second organic material, said sensors forming a combinatorial sensor array.

262. (Previously Presented) The method of claim 261, wherein the mole fraction of the first organic material in the first sensor is e, in the second sensor is f, in the third sensor is g and in the fourth sensor is h.

263. (Previously Presented) The method of claim 262, wherein e, f, g and It are all different numbers.

264. (Previously Presented) The method of claim 261, wherein, after the step of contacting said first region and said second region near the top edge of said array with said first solution at concentration x, the method further comprises the step of varying the concentration of the first organic material in the first solution to concentration x+a.

265. (Previously Presented) The method of claim 264, wherein the concentration of the first organic material in the first solution is smoothly varied to concentration x+a.

266. (Previously Presented) The method of claim 264, wherein, after the step of varying the concentration of the first organic material in the first solution to concentration x+a, the method further comprises the step of moving the first solution from near the top of the array in the direction of said bottom of the array.

267. (Previously Presented) The method of claim 261, wherein, after the step of contacting said first and third regions near the left edge of said array with said second solution at concentration y, the method further comprises the step of varying the concentration of the second organic material in the second solution to concentration y+b.

268. (Previously Presented) The method of claim 267, wherein the concentration of the second organic material in the second solution is smoothly varied to concentration y+b.

269. (Previously Presented) The method of claim 267, wherein, after the step of varying the concentration of the second organic material in the second solution to concentration y+b, the method further comprises the step of moving the second solution from near the left edge of the array in the direction of said right edge of the array.